

# L'AMMONITORE

SPECIAL



# EMO Hannover

16-21·9·2019

The world of metalworking




 PRECITRAME

## SOLUTION FOR HIGH PRODUCTIVITY AND ADAPTABILITY

# PRECITRAME MTR312H SERIES



- Optimized price-performance ratio
- Doubled clamping force
- 5-sided machining with C axis
- Increased number of available tools
- Increased torque for spindle operations
- Automatic tool changer ATC440 for HSK-40
- User-friendly operation with the HMI Precitrime Machine Manager (PMM)
- Coolant up to 150 bar or MQL (minimum quantity lubrication)
- Compatible with the automated cell Precitrime CA61
- Turnkey solution



## TRANSFER FINISHING SOLUTION HIGH PRODUCTIVITY AND FLEXIBILITY

# CYBERPOLISH 900T SERIES



- Transfer finishing with 2 high productivity stations
- Combination of individual cells integrated in high volume production lines
- Optimized use of space
- Self-alignment of the geometry by integrated measurement
- Multiple operations in one clamping with 6 or 7 axes
- CyberMotion 5 multi-robot high precision trajectory tracking software
- Creation, generation and simulation of trajectories, integrated on the same interface




**EMO**  
Hannover  
BOOTH C76  
Hall 17 16-21-9-2019



# EMO Hannover

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## Interconnection? Yes, but under one condition...

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Change before you are forced to change is good advice for anyone in business – today just like in the past. The difference is that today changes do not only concern the technological factors, but notably also the cultural and management side of companies.

Transformation, especially when it is given a grand name like the “Industrial Revolution”, is always somewhat worrying – a reaction that people often conceal behind the same old phrase: “This is the way we’ve always done it, and our business always flourished.”

In the end, it is hard to blame the many executives who could raise their “babies” to top levels on the market with much sacrifice and high investment. When we talk about industrial revolutions (and Industry 4.0 truly is one), there is no time to hesitate – particularly when the train is not standing at the platform, but instead is hurtling down the tracks at high speed.

Digitalization in production is very a delicate matter that forces us to make a decision on what action to take. Everybody from management to skilled workers has to believe in this decision. Uncertainty has even wiped out such industrial giants as Nokia and Kodak – imagine what it could do to the small- and medium-sized enterprises that make up much of Italy’s economic fabric.

Changing the mentality at companies that are aiming for fully digitalized production – that is a matter of fact and not mere definition – is crucial if we want to face the Big Data issue correctly. This, together with the concept of the “smart factory”, will be the main topic at this year’s EMO.

Smart technology is the key to greater productivity and flexibility, as well as better quality, i.e. the traditional objectives that new developments and optimization in production technology revolve around.

Smart factory digitalization and interconnection also enable us to use new functions such as process monitoring and predictive maintenance. These functions further enhance the system with automatic learning by using smart data and data analysis.

EMO Hannover 2019 will focus on all the challenges we face in production: from machine technology through IT solutions to the changed job market situation. It will show how the next generation of machines will be more productive, more efficient, and flexible.

Several additional presentations will highlight how connectivity in production is rapidly spreading to all business areas – from order management, through preparing and planning production, to logistics.

Consequently, new functions and services will be developed that require proper qualifications and training in line with this new reality.

Major experts in the field claim that the trend for new production models is to see data as raw material for a company. Data are just as important for production as raw materials – even though they do not appear on the balance sheet.

Nevertheless, only a few companies are truly convinced about the strategic relevance of data. This is shown in a report compiled by the multinational consulting firm McKinsey in 2018. It revealed that, out of all data collected, 40% is stored, 1% is analyzed, less than 1% is shared, and 0% is used to make forecasts. These figures are quite alarming, especially for those of us who believed that most companies were up to speed with the fourth industrial revolution. Nevertheless, if we say the glass is half full, the potential of Industry 4.0 to boost the economy is far from exhausted.

di Fabio Chiavieri

# BFT BURZONI

## Top player in mechanical machining

Hall 05  
Stand F16

**All Catalogue products are all of high quality and ready for immediate delivery thanks to a qualified sales network.**

An authentic point of reference in the field of mechanical machining for chips removal. This is the distinctive characteristic at BFT Burzoni which, with its warehouse holding 10 million pieces divided in over 50.000 articles that are ready to go, can meet any need in the sector.

Bft Burzoni was created in 1974 by Alberto Burzoni and still reflects the strong personality of its founder, who is always active and dynamic, and the charisma of his daughter Arianna, who has been part of the company for 25 years, who tells us : “ the tool market is highly specialized and competition is intense. The high quality and up to date technology of our wide range of products are the foundation of our success. In addition to large numbers of standard products, all under the BFT Burzoni trademark, our technical office, run by Pierluigi Pozzi, realizes special tools upon customer request, with very short delivery times. Flexibility is one of our main characteristic. Our company logo is a black panther with yellow eyes, which reflects not only the corporate colours, but above all our agility and speed.”

Another strong point in BFT Burzoni is the team. There are 30 people working in the Podenzano headquarters and 22 agents under Sales Director Gian Luca Andrina “ Twenty sell in Italy and two in Germany, while other countries are served by retailers. Essential for our sales agents is the technical competence, they are able to advise a client regarding the right product. To find the best performance tool, means to save significant amounts of time and money for our customers.”



In 2019 BFT Burzoni was present in: Mecpse in Parma, 28-29-30 march, IVS ( Italian Valves Summit ) in Bergamo, 22 e 23 May, and it will be at Hall 5 at next EMO in Hannover from the 16th to the 21st of September. EMO is a very important venue for BFT Burzoni to increase business abroad.

BFT Burzoni is a constantly evolving company and during the EMO will present four new line of products :

**B-DRILL**, a complete line of indexable drills 3xD, 4xD and 5xD, with 4 cutting edge inserts suitable for all materials, the M1 geometry has been especially engineered for stainless steel and heat-resistant super alloys.  
**CU-DRILL**, a complete line of indexable drills 3xD, 5xD and 8xD. The spade drills cover from diameter 8 to 26 and can machine every kind of material, performing in a reliable way.

**CASTORO LINE**, complete and innovative range of parting-off and grooving inserts. The new grade TSL40, combined with the special geometry X1 is very performing in inconel and all other heat-resistant super alloys during machining.

CNMG 120404/08/12, will complete the range of the successful Gold Panther turning inserts with very performing grades and innovative control chip geometries.

Alongside the new products, BFT Burzoni boasts the grades CCT35 and CCD40 successfully affirmed on the market. They are very performing in all kinds of stainless steel, Duplex, Superduplex, titanium, inconel and all heat-resistant super alloys; they grant high toughness under extreme temperature conditions, permitting high cutting speeds and longer tool life, as well as absolute reliability during both milling and turning machining processes.

On the long route set out by Alberto Burzoni, 90% of business is generated in Italy and the other 10% abroad has gradually grown. This year it will exceed 26 million euros. “ We have a great potential for further growth in foreign countries, but we want to do that step by step. It is very important to continue to keep up the service we provide to our customers, with a team who works well together. Essential for our philosophy has always been to be direct and cordial towards people, be they employees, clients or suppliers”, underlines Arianna Burzoni.

The company looks to the future with optimism, keeping on its path with passion for its work and professionalism.



**EMO**

Hall 5\_Stand F16  
**HANNOVER**  
16-21/09/19



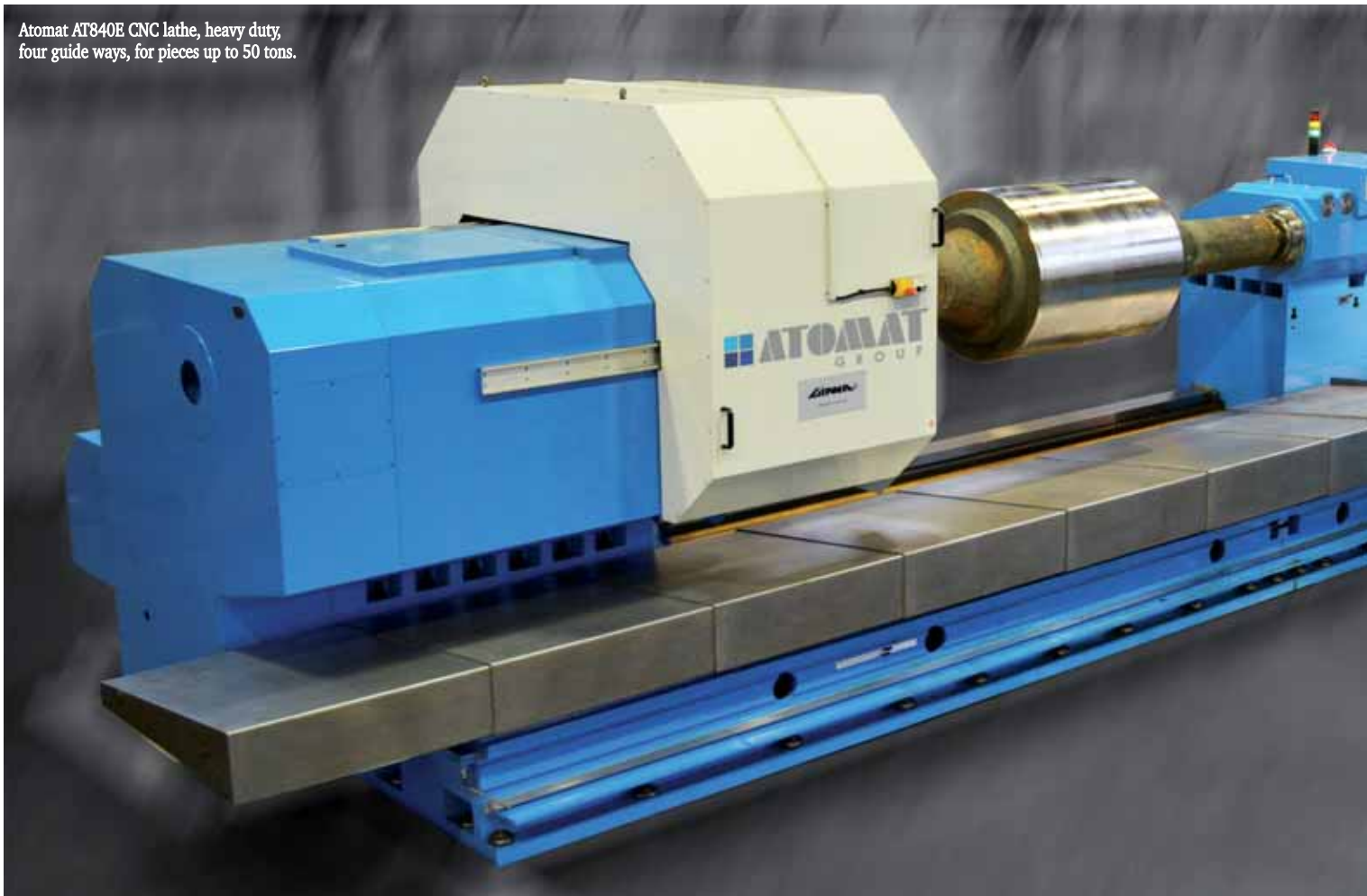
45.000 items.



10 million pieces  
ready for delivery.

[www.bftburzoni.com](http://www.bftburzoni.com)

Atomat AT840E CNC lathe, heavy duty, four guide ways, for pieces up to 50 tons.



# ATOMAT

Atomat, a Friuli-based company and major player in the production of machine tools, has taken over the well-established Giana SpA of Magnago (MI) brand, once a world leader in precision engineering. Last June, Giana SpA's entire production facility was transferred from Magnago to the Atomat plant in Remanzacco. In the 1950s, Giana's machining workshops became established on a worldwide scale in the design and production of high-precision machine tools and, in particular, in the production of large lathes. However, as has often been the case in Italy's recent industrial and economic history, the difficulties arising from generational transitions, the recession of the past ten years and fierce competition on international markets meant that Italy risked losing this prestigious brand altogether. The operation carried out by Atomat bucks the trend whereby big Italian firms have either gone out of business or fallen into foreign





hands and been moved out of the country. The acquisition of the brand and the company's assets is the final stage in a collaboration that began in the 1990s, resulting in the takeover by Atomat in 2013 and the signing of a business lease agreement in 2017 – moves that have made it possible to keep a major brand and its manufacturing activities entirely in Italy. Atomat, for its part, has a tradition in the design and production of machine tools dating back half a century, and its Remanzacco plant includes departments specialising in mechanical processes such as turning, grinding and toolmaking. Product innovation has always been one of the strong points of this expertise, together with an ability to meet the production challenges posed by clients at home and abroad.



# Controls and measuring technology from HEIDENHAIN:

## Reliable processes for exact, dynamic, and efficient production

Hall 09  
Stand F32

*Having command of highly complex procedures is a clear competitive advantage when it comes to milling and turning. Machine tools that are equipped with controls, encoders, and drive technology from HEIDENHAIN provide the best technical prerequisites. This will be impressively shown in the live demonstrations and presentations at the HEIDENHAIN booth and the "industrie 4.0 area" at EMO 2019. With the stated goal of highly qualified TNC users working with such machines, HEIDENHAIN is active in the TNC Club and the Young Talent Foundation for Mechanical Engineering for advanced and apprentice-level skilled training.*

In order to manufacture products that satisfy the highest demands regarding accuracy and quality in a reliable, economic, and ef-

ficient process, many different building blocks all around the machine tool must fit and interact perfectly. At EMO 2019, HEIDENHAIN will use presentations and live demonstrations to show very different combinations and possible solutions for process optimization.

### New options, features, and hardware for TNC controls

Even starting with a lot size of just one piece, HEIDENHAIN controls convince you of their process reliability, accuracy, and productivity. Furthermore, they facilitate the simple and reliable digital integration of the machine into the process chain. Packages of functions including Dynamic Precision, Dynamic Efficiency, and Connected Machining as well as numerous additional options en-

sure this.

Thanks to its split screen, the new TNC 640 with a 24-inch widescreen and Extended Workspace Compact can offer two work areas: the user can have other applications be displayed alongside the control screen. This way he has an especially user-friendly workstation in order to organize jobs completely digitally directly on the control.

HEIDENHAIN will also present the new Component Monitoring option for TNC controls. Its focused observance protects processes and machines from equipment failure due to wear or overload:

Continuous monitoring of the spindle bearing load prevents defined limit values from being exceeded, thus preventing damage to the spindle.

Cyclic monitoring of the feed axes permits conclusions about the wear of the ball screw and any expected failure.

This increases the process reliability, productivity, and lifetime of the machine, while at the same time reducing unplanned machine downtimes and their associated significant costs.

With live demonstrations in the "mav industrie 4.0 area," the companies HEIDENHAIN, OPS-Ingersoll, and Haimer will show that the intelligent data management of an automated manufacturing environment, including predictive job planning, works reliably and efficiently. The TNC 640 control, Batch Process Manager, and the StateMonitor software from HEIDENHAIN make perfectly organized and fully digital processes possible.

### An encoder solution for every rotary axis

HEIDENHAIN encoders for determining the posi-



Control technology that moves intelligently: the new GEN 3 generation of drives from HEIDENHAIN offers maximum performance through innovative transmission technology and powerful diagnostics.



# HEIDENHAIN



## The TNC 640 and Extended Workspace Compact Keeping digital job management in view

In a fully digitalized and networked production environment, the user at the machine enjoys direct access to useful and relevant information. He can also bring his expertise to bear directly on the wider process chain. To make this possible, the TNC 640 with Extended Workspace Compact and a 24-inch widescreen offers an especially user-friendly workstation. The user can display additional applications alongside the control screen and organize his jobs fully digitally right on the control.

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20128 Milan, Italy

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www.heidenhain.it

Angle Encoders + Linear Encoders + Contouring Controls + Digital Readouts + Length Gauges + Rotary Encoders

tion of linear and rotary axes are the industrial standard for Closed Loop control, where the dimensionally accurate production of contours is not affected by thermally induced changes to the feed mechanism. At EMO 2019, HEIDENHAIN will particularly focus on angle encoders, and together with AMO will present solutions for every rotary axis:

The RCN 2001 optical angle encoders with integral bearing and integrated stator coupling have been fundamentally redesigned. The system accuracy is now even better and the maximum speed higher. Enhanced capabilities for monitoring the temperature increase the process reliability. The RCN 2001 angle encoders accomplish this by transmitting not only the temperature values of the integrated temperature sensor over a digital interface, but also other sensor data, particularly the temperature of the torque motor. The new generation of modular, optical ERA angle encoders is now also equipped with the HEIDENHAIN HSP 1.0 signal processing ASIC. Until now the HSP 1.0 has been used only in exposed linear encoders. It almost entirely compensates for fluctuations in signal amplitude caused by interference.

At the EMO trade show, AMO will present its WMKA modular scale-tape solution for especially large diameters. These encoders fea-

ture EnDat and DRIVE CliQ interfaces and are suited for safety-related applications. A demonstration unit with four different angle encoders will illustrate the influence of the scanning principle on the dynamics and accuracy of rotary axes. It will also show the system architecture for digital temperature monitoring of an ETEL torque motor.

#### Innovative setup and measuring

HEIDENHAIN touch probes and the numerous probing cycles of HEIDENHAIN controls increase the dimensional accuracy of finished workpieces. Setup and measurement of workpieces and tools, as well as calibration of the machine kinematics, are all performed quickly and easily before machining or during operation. The touch probes are optimally tuned to the TNC cycles. Above and beyond this, the wear-free sensor technology of the touch probes, flushers/blowers for cleaning the measuring point, battery monitoring, and effective collision protection ensure results measured with process reliability.

#### Greater performance and process reliability through new generations of drive systems

Motors and control technology from ETEL and HEIDENHAIN significantly contribute to the dynamic and highly accurate motion control of machine tools.

The new GEN 3 generation of drives from HEIDENHAIN, which will debut at EMO, ensures maximum performance and offers intelligent transmission technology, powerful diagnostics, and simple mounting and connection technology.

ETEL will present its TMB and TMK series of torque motors, which are high-torque systems for machine tools. Their particular strengths are a cogging-free design, optimum speed stability, and exceptionally high control quality. Together with measuring technology from HEIDENHAIN, they form a perfect combination for high-end rotary axes. Their excellent dynamic accuracy, high rotational speeds and torques, and perfectly coordinated diagnostics are convincing.

#### TNC Club: the meeting point for experts, now with new training offers

While once again being a meeting point for experts, the HEIDENHAIN TNC Club booth at EMO is open to all TNC users. Here the focus is on the advanced training of experienced specialists as well as on the apprentice training of qualified junior employees. At EMO, the TNC Club will present a new training program for career jumpers: a training program to become a TNC specialist. HEIDENHAIN would like to thus support the premium members of the TNC Club in coping with the shortage of skilled workers.

#### HEIDENHAIN is a partner of umati

Digital networking and the concomitant possibilities for machine data acquisition as well as for monitoring of equipment and processes require universal and standardized interfaces. Only if standardized information can be exchanged between participants across systems is it easy to connect solutions like the StateMonitor software, which can then develop their full potential. That is why HEIDENHAIN supports the umati interface project from VDW (the German Machine Tool Builders' Association). Dr. Jan Braasch, Director of Marketing at DR. JOHANNES HEIDENHAIN GmbH says, "As a manufacturer of controls and encoders, HEIDENHAIN welcomes the VDW initiative and supports the umati project. At EMO we will give a live demonstration of how umati is used to connect machine tools to the StateMonitor software from HEIDENHAIN."



Processes and jobs never out of sight: thanks to its split screen, the new TNC 640 with a 24-inch widescreen and Extended Workspace Compact offers two work areas—one for the control screen and one for other applications.

# EROWA JMS 4.0

## Smart Factory

Hall 12  
Stand E83

The EROWA process control system JMS 4.0 plays a major role in detailed production planning. It forms a large part of the functionalities which are described as "Smart factory".

The machines permanently report their status, the in-process control with automatic feedback allows production to run at the highest quality level. Flexible interfaces to upstream and downstream systems are a matter of course. Workpiece pallets and electrode holders can be identified at any time using RFID chips.

Important advantages arise for the user: It is always clear which workpiece is at which point in the process at what time. In addition, there is an unequalled clear statement on the productivity of the integrated systems. Keyword: OEE (Overall equipment effectiveness) and creating transparency to optimize existing processes if necessary.

On the OEE Dashboard you can see at a glance what the efficiency status is like.

Various screens offer a clear and structured overview for all production cells, or individually down to the last detail for a single machine.

Fully automatic cells can be monitored with CCTV cameras. Various camera settings are displayed directly in the JMS 4.0 Process Control System.

All necessary information is available to the machine operator on one screen. Further views can be called up quickly via sliders.

Live Alarm - Regardless of your current location, the JMS 4.0 Alarming app informs you about the status of your JMS 4.0 production cell.

Receive push notifications as soon as your machine or robot receives critical alarms or orders are no longer available.

The EROWA JMS 4.0 software provides a clear overview. It connects all data and controls the entire manufacturing process. With modular software modules, it can also be expanded at any time as required.



# NEW PERSPECTIVES

EMO 2019

Hall 12 / E 83

Ready for the future

EROWA is showing once more that even a trail-blazing original can be revolutionized.

[www.erowa.com](http://www.erowa.com)

EROWA®  
system solutions



# Driven Tools for turning centres

Hall 05  
Stand E69



After the recent release on the market of important product novelties in the tooling field, Gerardi has decided to increase the range offer, especially oriented to the production of driven tool-holders for NC turning centres, which allow executing milling, drilling and tapping operations on the lathe itself without further setups. The company proposes a wide range of suitable models for equipping the lathes and the driven turrets by world leader manufacturers, such as Biglia, Bmt, DMG Mori, Goodway, Haas, Mazak, Miyano, Nakamura and Okuma. In the new Tooling catalogue, each manufacturer will find several novelties, including a new series of driven BMT 45-55-65-75 solutions,

now available also with spindle concordant tool rotation, and no longer only discordant, a driven line for Tsugami lathes, new tool-holder models with Capto taper for NL DMG More lathes, the new line of driven systems for Biglia BMT40 lathes and much more.

«Our first core activity was the production of angle heads for the sector of milling machines – explains Ivano Gerardi, Export Manager of the company – but, as our customers were confident in the quality of our solutions, we decided to satisfy these demands, approaching also the turning market with products that meet very complex technical requirements, too». They have extended the

modular concept also to driven devices: in Haas lathes, for instance, turrets require different tapers depending on the chosen model. Actually, differences do not concern the taper only but instead the more or less deep drive. Therefore, Gerardi has implemented some modules with different length, installable on the same driven system so that it is possible to mount it on all typologies of Haas lathes. Even the modular quick tool changers developed and proposed by Gerardi are universal: other manufacturers have developed proprietary solutions whereas the use of two simple adapters allow Gerardi models to suit the majority of driven solutions and angle heads on trade.



Made in Italy



EMO  
Hannover

Hall / Booth  
05-E69



GERARDI

www.gerardi.it

ZERO POINT, NEVER STOP EVOLVING



## DOUBLE ZERO POINT

IMMEDIATE POSITIONING & CLAMPING  
and ACCURATE REPEATABILITY

SPECIAL  
PRICE

2 YEARS  
WARRANTY

READY in  
STOCK

The Zero Point evolving goes on...

Double Zero Point has been developed by the need to clamp workpieces and fixtures of all kind of shapes and sizes. Thanks to a grid system you can get an **IMMEDIATE RECONFIGURATION** always granting the highest precision and allowing max. accessibility and machining on 5 sides.

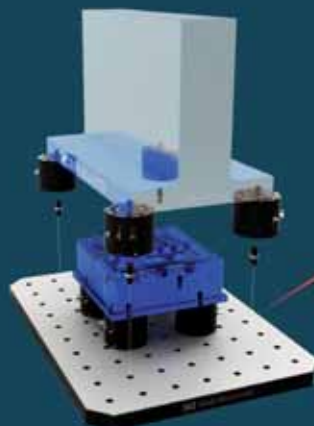
Zero Point allows you to set up jobs in few seconds on the machine, saving around 95% set up time, increasing production and reducing scrapes.

Double Zero Point allows to change the position of the Zero Point units to clamp and position fixtures and workpieces even of different sizes on the same base plate.

Pull-Stud for  
workpiece



Pull-Stud for  
grid plate



Scan the QR code

and discover more about Zero Point System

# FMB will exhibit at the EMO in Hannover

Hall 15  
Stand F06



FMB is an Italian company which has strongly established itself on the international worldwide market of bandsaw and drilling machines for metals.

Multilanguage manuals and technical support, trainings, quick delivery of spare parts (even for machines gone out of production): these are only some of the advantages that FMB guarantees to all its customers.

The philosophy FMB follows is to give the best quality with the correct price, this is the reason why FMB chose its suppliers who share the same view for the realisation of the FMB's property drawings and projects. FMB will participate as historical exhibitor at the EMO fair, which will take place in Hannover from the 16th to the 21st June 2019, the most important event of the world of metal working. We will be at the Pav. 15 booth F06.

At our stand you will see the new model of FMB: the automatic Athena 41 A bandsaw, a totally protected bandsaw for the 0° cuts with a blade with height H41 which reaches a cutting capacity of 460mm in diameter and 460 in width. Athena 41 A is also equipped with a technologic 10" touch screen display which is conform to the rules for the Industry 4.0. Athena 41 A is also equipped with an intelligent software: the user will have the possibility to insert the values concerning the dimensions, the material and the geometry of the piece to be cut and the machine will calculate and follow the correct parameters for the cut (with possibility to change them for the operator). At our stand you will also see our semiautomatic biggest double column bandsaw, the Olimpus 1 XL model, a H41 blade equipped machine which reaches the cutting capacity of 540mm in diameter and 1030 mm in width.

Two semiautomatic bandsaws for the degrees cut will also be shown by FMB: the vertical Solar bandsaw, with a H34 blade for the cut up to 60° to the left and 60° to the right with a cutting capacity of 460mm in diameter and the model Saturn, with a blade H27 for cuts up to 45° left and 60° to the right, reaching 305mm in diameter and 375 in vice opening. At our stand you will see also one of the most popular models of our range of products, the automatic Zeus+CN bandsaw, a machine with an H27 blade for the 0° cutting which reaches the capacity of 260mm in diameter and 270mm in vice opening.

FMB offer also a wide choice of options which are installable on the different bandsaw models, this allows us to offer to our customers the suitable solution for the different needs requested, giving to our customer always the best solution for the requested aim.

We will be glad to meet you and to show you our products at our booth F06 Hall 15, It will be a pleasure for us to welcome you at the EMO 2019!



# THE NEW GENERATION

BANDSAW AND DRILLING MACHINES

WE ARE WAITING FOR YOU AT  
**EMO HANNOVER**  
FROM 16<sup>TH</sup> TO 21<sup>TH</sup> OF SEPTEMBER  
**HALL 15 BOOTH F06**



SEMI-AUTOMATIC BANDSAW MACHINE  
**OLIMPUS 1 XL**

SEMI-AUTOMATIC BANDSAW MACHINE

**SOLAR**



AUTOMATIC BANDSAW MACHINE  
**ZEUS+CN**



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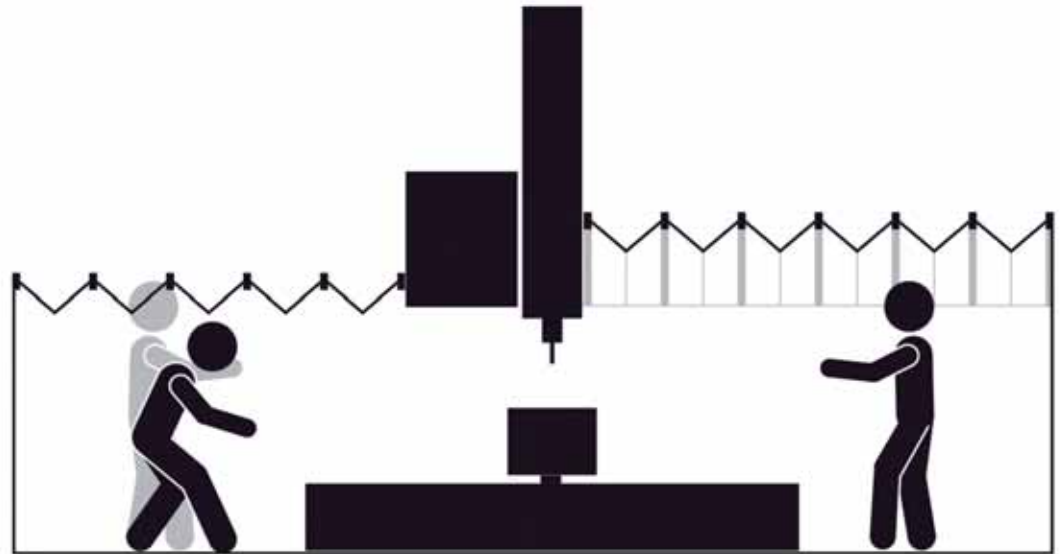


# A protective cover for all heights

Hall 07  
Stand B42

For some years now P.E.I. has a roof cover for portal milling machines in its range of products – Wave Sky. Wave Sky is manufactured using a special translucent fabric and limits the escape of fumes, dust and chips from the work area. Over the years the original idea has been developed further: a version with motor has been realised to facilitate the opening and closing of the machine roof, followed by an innovative modular construction with integrated low-voltage motor.

Now a new version has been presented - Wave Cover – which is not intended to replace the classic Wave Sky, but to complement it. The new version is no longer limited to the guideways being installed at the highest possible position. The initial Wave Sky was installed hanging below the guideways. In the case of small machines this means that the headroom is reduced. Assuming a height of approximately 2 m for example, the folds of the bellows considerably decrease the headroom for the machine operator inside the work area. For this reason P.E.I. has devised Wave Cover, says Michele Benedetti, managing director of the Bolognese Group: “For some time we have registered a market request for efficient protection covers for increasingly compact machines which manufacturers nowadays prefer to design. Our solution offers the possibility to completely cover from the top



even machines with a reduced Z-axis, while allowing the machine operator to access the machining chamber without opening the cover. Wave Cover is based on a modular system similar to Wave Sky. The shape, however, resembles more that of a gable roof, which provides for more headway and allows positioning the cover at every height of the guideways”.

Unlike Wave Sky, Wave Cover is portal-shaped with limbs and a roof. For applications with guideways below the gravity centre, our design engineers had to find a solution to prevent tilting and contemporaneously guaranteeing that the portal-shaped structure would stay upright on its own. A newly developed type of hinge made of synthetic material is integrated in the limbs.

This hinge is stiff enough to prevent tilting, but flexible enough to ensure the opening and closing movement of the mechanism. The system guarantees that the frames remain in a parallel and vertical position. This product is the result of an extraordinary synergy of resources within the P.E.I. group: “The shape was inspired by the solutions developed for the bellows used in articulated buses. Wave Sky contributes its know-how regarding the special oil- and abrasion resistant material composition. This solution is a completely innovative approach of this type on the market. The stiffening system between the frames is the actual innovation of the construction and therefore the part covered by patent”.

## Continuous Innovation

The P.E.I. – group globally disposes of competences in the design and elaboration of solutions for every type of protective cover available on the market. The machine manufacturer finds in P.E.I. a sole contact, a single supplier able to give definite and comprehensive responses, based on a real demand instead of standard products which are adapted accordingly. Over the past decades, the group has always considered continuous innovation as an important criterion and has thus developed many solutions which are unique on the market. There have been many attempts to imitate P.E.I. products but they are protected by numerous international patents.



## WAVE COVER

new  
2019

La **protezione del cielo** per macchine con asse Z inferiore a 2 metri



Domanda di brevetto depositata

## DUAL BARRIER - 2EVO

new  
2019



La **protezione completa** costituita da sezioni di soffietto termosaldato e da una copertura telescopica



Domanda di brevetto depositata

## UNIQUE STEEL COVER

new  
2019



La **protezione LIGHT** di lamelle in acciaio inox

Domanda di brevetto depositata

Visit us at:  
**Hannover**  
16-21-9-2019  
Hall 7 • Stand B42



**P**rotezioni  
**E**laborazioni  
**I**ndustriali



# Automation and digitization in Hall 2

**27 automations**, among them modular and robot-supported workpiece handlings as well as systems pallet handlings up to autonomous transport systems

**Integrated Digitization:** Intelligent services and applications with integral connectivity for networked production

**Over 30 digital innovations** incl. new CELOS APPs, extensive DMG MORI Monitoring, efficient production planning and control as well as web-based maintenance optimization

**my DMG MORI:** Unique customer portal for more transparency, quality, and speed in all service processes

**ADDITIVE MANUFACTURING:** Open process chain from material cycle to simulation and on through to service and consulting

**DMG MORI Technology Excellence:** Process solutions including certification through to green field projects

DMG MORI is the global and sustainable driver of progress in 42 branches and the leading manufacturer of metal cutting machine tools worldwide. The machine tool

manufacturer underscores this position at this year's EMO with groundbreaking developments for the production of the future. From the 16<sup>th</sup> to 21<sup>th</sup> of September 2019 DMG MORI will use the industry's leading trade fair to present the latest innovations in the fields of Automation, Integrated Digitization and ADDITIVE MANUFACTURING. 27 of the 45 exhibits in Hall 2 at the North entrance will be presented with automation solutions. Where digitization is concerned DMG MORI will be focusing on the topic of "connectivity" as the basis for all future-oriented products and technologies. The connectivity includes all machines, all protocols, and works with all platforms as well as products. The latest CELOS version update and automation solutions – among them modular and robot-supported workpiece handlings as well as pallet solutions – round off the range. The new customer portal my DMG MORI will also be presented. The DMG MORI Technology Excellence Centers for the key industries Aerospace, Automotive, Die & Mold and Medical complete DMG MORI's trade fair presence.

## Automation:

### Automated value creation with all DMG MORI machines

The WH CELL and WH FLEX are just two of the 27 automation solutions that DMG MORI will be showcasing at the EMO. After the successful start of DMG MORI HEITEC at the end of 2017 several dozen projects could be realized. In future DMG MORI will offer all the machine tools in its portfolio with automation solutions, in order to meet the massive and steadily increasing demand. Another highlight among the numerous automation solutions in Hall 2 is the DMU 65 monoBLOCK with the new AGV (Automated Guided Vehicle), a stand-alone system for pallet automation. This innovative solution offers a flexible automation layout with free access to the machine and an intelligent safety concept for human-machine collaboration.

## Integrated Digitization:

### Intelligent services and applications with integral connectivity for networked production

For DMG MORI "connectivity" constitutes one of the core features on the path to the digital factory, because only open interfaces and standardized communication protocols can ensure future-oriented end-to-end integration and interoperability of machines and processes. That is why in future all new machines from DMG MORI will be connectivity compliant in their standard versions at no extra cost. Whereby the new IIoT interface supports both the standard MQTT and MTconnect protocols as well as the new umati (universal machine and tool interface) branch standard based on OPC UA.

DMG MORI will be presenting the new CELOS APPs in line with its focus on integrated connectivity. The new APPLICATION CONNECTOR, for example, enables the operation of all web-based applications directly via CELOS. So direct interaction with MES or ERP systems is possible as is access to specialized customer applications. The new JOB IMPORT feature enables orders to be imported directly from MES or ERP into the CELOS JOB MANAGER.

Maximum customer benefit is also the focus of the new digital customer portal my DMG MORI. DMG MORI brings together the expectations of its future-oriented initiatives "Integrated Digitization", "First Quality" and "Customer First". The result is a unique online portal for interactive cooperation between DMG MORI and its customers.



45 HIGH-TECH MACHINES

27 AUTOMATION SOLUTIONS

>30 DIGITAL INNOVATIONS

CONNECTIVITY COMPLETED

ADDITIVE MANUFACTURING

Creating the digital future actively: DMG MORI will be showcasing automation and digitization solutions live in Hall 2 at this year's EMO in Hannover.

A highlight among the numerous automation solutions in Hall 2 is the DMU 65 monoBLOCK with the new AGV (Automated Guided Vehicle), a stand-alone system for pallet automation.



Among other things service requests can in future be started virtually at the press of a button via *my* DMG MORI. Whereby the interactive request form prevents any misunderstandings. Specific service requests and optionally attached photos or videos now immediately reach the right DMG MORI service expert, while the "Tracking & Tracing" function ensures transparency for all service processes and procedures. Even orders for spare parts can be tracked down to the exact minute.

#### ADDITIVE MANUFACTURING:

**Open process chain from material cycle to simulation and on through to service and consulting**

Four complete process chains for additive processes with powder bed and powder nozzle technology make DMG MORI the global full-liner in ADDITIVE MANUFACTURING. The powder bed machines in the LASERTEC SLM series are designed for the productive manufacturing of complex workpieces. The precision of selective laser melting enables the realization of complex geometries that would be impossible to produce with conventional methods. The series includes the successful LASERTEC 30 SLM 2<sup>nd</sup> Generation with a 300 × 300 × 300 mm build volume and the LASERTEC 12 SLM, which owes its unique accuracy to its focus diameter of just 35 μm. The fast powder change using the *re*PLUG powder modules takes in less than two hours. The OPTOMET software enables automatic calculation of all process parameters within days instead of months. Layer thicknesses, for example, can be calculated freely, which in turn enables a faster and therefore also more productive build.

As a powder nozzle machine developed primarily for larger workpieces of up to

ø 500 x 400 mm and weights of 600 kg, the LASERTEC 65 3D *hybrid* unites the build of workpieces using laser deposition welding and 5-axis simultaneous milling operations in a single setup. This hybrid approach enables the production of highly complex geometries in finished-part quality

as well as the use of different materials in one workpiece. DMG MORI will present the LASERTEC 65 3D *hybrid* at the EMO with a series of monitoring and calibration sensors, which boost process reliability and further enhance the quality of additively produced components. Furthermore, laser deposition welding is also suitable for the re-



Where digitization is concerned DMG MORI will be focusing on the topic of "connectivity" as the basis for all future-oriented products and technologies.

my DMG MORI: Unique customer portal for more transparency, Quality, and speed in all service processes.



pairing of tools. DMG MORI will be showcasing an automated concept for this at the EMO.

**DMG MORI Technology Excellence: Process solutions including certification through to green field projects**

For several years now DMG MORI has successfully operated its Technology Excellence Centers which focus on the key Aerospace, Automotive, Die & Mold and

Medical Technology industries. Their strategy is to work closely with customers in the very early project phases in order to realize optimum manufacturing concepts. The focus here has long shifted away from just machine tools to encompass integral process solutions including certification and on through to green field projects for the required applications. DMG MORI cooperates in this respect with numerous partners so that optimum tools, clamping

devices and automation solutions can be integrated. The range of services extends to such a degree that DMG MORI even supports its customers in questions of certifications, where, for example, entry into a new branch such as the medical technology sector is concerned.

The DMG MORI Technology Excellence Centers offer all services necessary for the successful conclusion of a project from a single source.

The powder bed machines in the LASERTEC SLM series are designed for the productive manufacturing of complex workpieces.





Hanover, 16/09 - 21/09/2019

# HALL 2 NORTH ENTRANCE



**45** HIGH-TECH MACHINES

**29** AUTOMATION SOLUTIONS

**>30** DIGITAL INNOVATIONS

CONNECTIVITY COMPLETED

ADDITIVE MANUFACTURING

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**DMG MORI**

# Filtration Systems

Hall 07  
Stand C10

Since 1974 Losma S.p.A. designs and engineers air and coolant filtration systems for machine tools proposing solutions that cover most of the plant engineering requirements of the market. The company has grown over this past 45 years to become one of the market leaders, with more than 140 employees in the two Italian offices and in the four subsidiaries that make up the group: Germany, India, UK and USA. The Group closed 2018, increasing revenues by over 25%, reaching almost 21 million euros. The export quota exceeds 60%. In 2018 more than 30 new people were hired. Providing high quality and environmentally friendly products is from the beginning an integral part of the company's DNA. LOSMA was founded with the mission of making the working environment healthier, focusing on filtration and guaranteeing a safe environment; has a strong eco-friendly identity and is committed to finding new solutions that help preserving the environment. The corporate mission "Working Clean, Breathing Healthy" is clear in the continuous search for increasingly efficient and eco-compatible filtration solutions. High energy efficiency motors, regenerable filters, inverter to regulate consumption are just

some of the devices used in the Losma families of air and coolant filtration, to ensure maximum compatibility of the plants with European regulations on environmental management.

Each LOSMA system undergoes rigorous control tests, after which a qualitative and functional test certificate is issued.

From this historical know-how the mist collector range is born, with products such as: Icarus – mist collector with compact form factor to be mounted on machine tools with HEPA filters, static or electrostatic, for oil mist and smoke treatment.

Argos – filtration unit with cartridgeAs for oil mist able to treat up to 15.000 m<sup>3</sup>/h, perfect for centralized solutions and big machine tools.

Pascal – filtration unit with cartridges for dry dusts and smoke, it is available also mounted on a trolley – Pascal M, allowing easy transport, or as a solution for centralized systems and big machine tools.

Galileo - a patented centrifugal filter for mist generated from neat oil and emulsions used in machine tools, also suitable in the presence of particulate. It is designed to be assembled to the machine tools.

For the filtration and depuration of coolants Losma offers solutions with or without consumable materials to treat neat oil or emulsion. Some examples:

Master: a range of high efficiency gravity filters, using non-woven fabric as filter media. Spring: self-cleaning drum system, with permanent metallic filtering net for the depuration from magnetic and non magnetic particles.

Extra: gravity bed filter, available upon request with augmented depth for better efficiency in smaller dimensions.

Every filtration system can be combined with oil skimmer, chiller, mud compactor and chip conveyor to create a centralized system able to meet the customer's needs.

LOSMA operates with ISO 9001:2015 certified quality management systems and ISO 14001:2015 certified environmental management systems. Both standard and customized Losma products, both single units and large centralized systems are unique and innovative, are widespread throughout the world and are known for their high efficiency, reliability, modularity and excellent value for money. LOSMA will be present at EMO HANNOVER from September 16th to 21st.



# LOSMA®

WORKING CLEAN, BREATHING HEALTHY



## PURE TECHNOLOGY MADE FOR PEOPLE



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HALL 7 STAND C10



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# Marposs at EMO 2019: your best partner for electro mobility

Hall 06  
Stand B26

*"Smart technologies driving tomorrow's production": this is the motto of EMO Hannover 2019.*

EMO is the world's leading trade fair for metalworking that will take place from 16 to 21 September 2019: exhibitors travel to EMO Hannover from all over the world and from all sectors of metalworking.

At this year's EMO Marposs will be introducing a completely new message: the main focal point at EMO fair is to show our customers how overcome challenges in the electric mobility with our systems. In fact, the Group provides a wide range of successful solutions for EV and is able to provide every possible information on the manufacturing process to the controller. Marposs has invested in new technologies, solutions and in human resources to support the growing demand, in addition to confirming itself as an established partner for the manufacturing industry. Marposs has ventured into both paths by investing in both internal R&D and acquiring hi-tech companies, specialized in solutions complementary with its traditional ones, thus increasing its proposal to the market as well as its organisation. Today, Marposs is a group of companies accounting more than 3,600 employees and is present in more than 80 locations across 34 different countries.

## The Marposs' perfect synergy

"Electric Vehicle" is for sure the keyword to Marposs at EMO 2019. The Group will present solutions for complex parts and simple components inspection, from battery pack to electric motor enclosure, and gauging systems for mechanical shafts involved into vehicle motion.



Marposs HQ: the headquarters facilities in Bentivoglio (Italy)

For what concerns our control and monitoring solutions, Marposs presents at EMO 2019 a complete software line from Ready2Probe, an easy way to program measuring cycle aimed at those who have a very limited knowledge of ISO language, to CNC Probing Recorder, an automatic measurement data collection for who need to trace production quality. The above software with Marposs' probing solutions makes the perfect synergy for customer satisfaction.

Specifically about Probing Systems, Marposs' will show how to inspect an electric motor enclosure on a machine tool. WRSP60 scanning probe will measure roundness of a cylindrical seat showing the displacement from the nominal profile on a polar graph, while VTS WF85, Marposs' Visual tool Setter, will inspect tool inserts profile and surface for integrity check, to guarantee perfect finishing results.

Precise measurements on inclined surfaces will be performed by VOP40P, the high precision probe with piezo-electric technology on board. Hyper probing software will operate

the machine to its maximum production capacity, measuring at feed rate up to 5000 mm/min.

## Marposs' tool monitoring solutions driving tomorrow's production

At this year's EMO Marposs will also present itself as a leader in process monitoring during production, thanks to innovative ARTIS solutions.

For each machining operation our tool monitoring solutions will keep under control the cutting process through: GEMTMUTP, ideal for tool wear and breakage detection; GEMVM03, able to detect tool unbalance, abnormal vibrations during machining and spindle predictive maintenance; GEMTMURO system that uses the data of an inductive eddy current sensor to detect runout deviations of the tool holder caused by chips on the spindle chuck.

A fast axial tool breakage detection, executed by TBD, will complete the process control permitting to detect very small tools as well.

5-Axes machines and USM tools measurement for special materials, like ceramic and glass, are also focused at the Show. Marposs' will present two new products: Axis Check, a software capable of detecting any deviation in linear and rotary axes, and ML4USM, a software able to keep under control micron amplitude variation of USM tools.

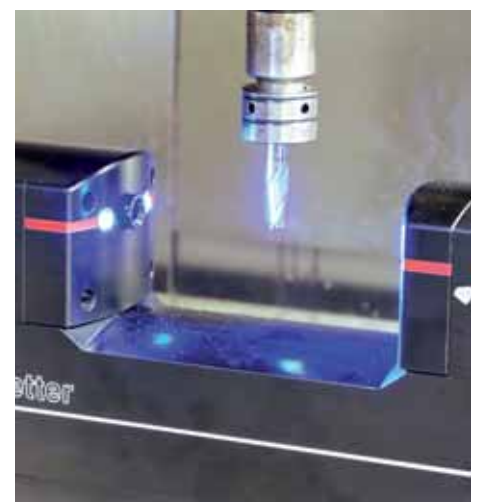
Finally, we can say that Marposs' technologies have become an integral part of manufacturing operations, preparing worldwide customers for Industry 4.0 and driving tomorrow's production.



ARTIS: Thanks to Artis innovative solutions, Marposs is a leader in process monitoring during production.



VOP40P: The high precision probe, with piezo-electric technology on board, for precise measurements on inclined surfaces



VTS inspects tool inserts profile and surface for integrity check in a very short time.

# MARPOSS

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AND PLATES



BATTERY  
CELL



BATTERY  
MODULE



BATTERY PACK  
ASSEMBLY

### THE TRACTION BATTERY

### THE CORE ELEMENT OF AN ELECTRIC VEHICLE...AND MUCH MORE

Marposs, with a wide range of available options, offers tailor-made solutions for leakage control. With manual or automatic machine systems any type of battery cells, modules, packs, cooling circuits can be inspected, to fit all requirements of different industry sectors like automotive, consumer electronics, stationary storage.

  
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VISIT US  
**HALL 6 - STAND B26**



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*More than you expect*

# AXS 01 and AXS 10 (Patent Pending) – the NEW TECNO PIU' Access Control Systems

Tecno Più, world leader in the production of machine safety guards, after the success of the electronic brake project for tooling machines without safety systems designed to reduce the inertia of the moving parts, a project presented a year ago at the AMB in Stuttgart, has implemented its own electronic sector with the AXS system, an electronic access control, proposed in two versions: AXS 01 designed to protect those working inside robotic islands or perimeter systems and AXS 10 for machine tool and lift operators. This innovative system can allow / prevent access by personnel to the company's dangerous areas or machines, assuring and protecting compliance with the authorizations issued or not by the company to its employees and all this thanks to the simple use of personal badges available to each employee for the marking of entry and

exit of any timekeeping system, which uses one of the two available frequencies: 125 KHz and 13,5 MHz. The programming is immediate, through a master badge that is programmed by Tecno Più and remains at the disposal of the manager of the company assigned to the authorizations.

The AXS 01 system, in addition to being able to recognize if the operator is authorized to access the protected island, does not give consent to the machine until the same operator shows his badge again. This control prevents accidental restart by other authorized

personnel who ignores the presence of the operator inside the dangerous area.

The AXS 10 system is a pure access control to the controls of the machine or of the forklift which allows its use only by authorized personnel. In case of accidental forgetfulness of deactivation of the system at the end of the use of the machine, the system is programmed to auto-disable after 75 seconds. With its continuous research and experimentation, Tecno Più is confirmed as a reference company for companies that put their employees' safety first.



## A portfolio further enriched by many innovative products

Hall 15  
Stand E54

The sawing and storage technology specialist KASTO will be presenting a wide range of innovations at the EMO 2019 (16-21 September) in Hanover, Germany. The KASTO booth E54 in Hall 15 will feature an efficient energy recovery and storage concept for automated storage systems, plus new sawing machines for every requirement, ranging from the KASTOmicut workshop bandsaw and the versatile series KASTOwin/miwin to the KASTOvariospeed and KASTOtec high-performance production saws. Digital solutions will also be on show live in the booth's Smart Solutions Corner.

On request, KASTO can offer its automated storage systems with energy recovery and integrated energy storage. Surplus kinetic energy – such as that produced when braking the storage and retrieval machine or lowering lifting gear – can be converted into electricity, fed back into the grid and used flexibly. This solution not only reduces energy costs but also improves the quality of the power supply, since energy is continuously drawn from the supply, which in turn avoids load peaks. Operators can also often plan for and use smaller transformer stations, massively reducing investment costs. Existing KASTO storage systems can also be retrofitted with energy recovery and storage. KASTO will be demonstrating the energy concept at the EMO using a UNITOWER tower storage system.

Another booth highlight will be the "Smart Solutions Corner", where KASTO will be presenting its digitalisation and Industry 4.0 developments. Just one of many products, the KASTologic warehouse management system not only enables the continuous administration and control of automated storage systems, it also manages the mobile inventories of manual warehouse areas. The KASTOapp machine status display, the KASTOoptisaw saw plan generation system and the interactive remote maintenance solution, KASTO VisualAssistance will also be showcased at the trade fair. A video will show visitors how storage, sawing and material handling processes can be completely automated and optimised with KASTO solutions – all from one single source.



### More models expand the KASTO range of saws

The KASTOmiwin is a double mitre bandsaw for cut-to-length and mitre cuts between -45 and +60 degrees. It is available in semi-automated or fully-automated versions and is especially designed for parts cut to size in steel construction, steel trade, plant construction and special machine construction. KASTO also offers the swing-frame bandsaws of the KASTOmicut series in its portfolio. Available in two sizes, these saws are especially designed for use in workshops. Users can choose different cutting ranges and manually-operated, semi-automated or fully-automated versions.

The universal bandsaw series KASTOwin will also be exhibited at the EMO. The KASTOwin line is designed for the serial and production sawing of solid materials, pipes and sections. They offer a flexible solution for a wide range of applications. The different machine sizes are all designed using the same construction method and the components used are largely identical – and as a result, KASTO is able to offer the new saws at a significantly more attractive price than comparable products from other manufacturers. For particularly heavy workpieces, the KASTOwin is also available with a movable material support table. KASTO offers further special designs for the processing of pipes and additive manufactured components.

The production circular saw KASTOvariospeed is another all-rounder for steel processing.

This CNC-controlled sawing machine can process different materials flexibly – even those that are difficult to machine – and it is ideal for unmanned operation, especially in combination with a KASTOcenter sawing centre.

The robust design and high-performance, frequency-controlled drive ensure short cutting times, while the ultra-thin carbide saw blades guarantee outstanding precision and low material wastage. The EMO 2019 will also see another new member of the KASTO family make a first-time appearance – the KASTOvariospeed C18, which has a larger cutting range of 180 millimetres.

KASTO has extensively revised the automated bandsaw KASTOtec. Here the KASTO designers focused on the best possible use of carbide saw blades. The KASTOtec continues to im-

press with high cutting performance and long band life – even with difficult-to-cut materials such as titanium, hastelloy or inconel. Yet another new feature is the infinitely-adjustable, electro-mechanical saw feed, which provides the best prerequisites for efficient, highly-accurate and tool-friendly work. The saw feed control with its minimal use of sensors enables the cutting parameters to be continuously adjusted. A double saw blade band cleaning system automatically adjusts the brushes over their entire life, ensuring that they are always optimally positioned relative to the saw blade. This all contributes to an even higher standard in sawing performance.

# The centerless grinding has its first digital twin

Hall 11  
Booth F09

by Claudio Tacchella

Ghiringhelli introduces at the EMO the first centerless grinding machine conceived with the CNC Siemens Sinumerik ONE that allows a digital twin to be accomplished.

At the worldwide EMO2019 in Hannover, Hall 11, Booth F09, the company Rettificatrici Ghiringhelli S.p.A. - headquartered in Luino (VA) - will introduce as a first preview an outstanding technological innovation. It is a centerless grinding machine, APG-S type, designed, accomplished and fully controlled by using and integrating the brand new Siemens control called Sinumerik ONE. This is the first CNC "digital native" which allows the creation of a digital twin (DT) of the product, process and of the automation used. All this is carried out on a sole interaction system which merges the real and the virtual world, by implementing the concept of digitalization that features the Industry 4.0 paradigm.

*"For the development of this new system - says Mrs. Patrizia Ghiringhelli CEO of the same-named company, a limited number of trendsetter companies have been worldwide selected and involved. These latter come from heterogeneous manufacturing backgrounds and had the chance to experience this new control for more than a year in advance by closely working with the Siemens giant, each of them as "pilot" manufacturing companies and leaders in their application field. Among these*

*Ghiringhelli is the only one for the Italian sector of centerless grinding and we are proud of that! Many definitions of the digital twin can be given, but from our point of view the virtual support is a combina-*

The new APG-S centerless grinding machine will represent a practical example of the digital innovative implementation accomplished by the Ghiringhelli engineers.



The brand new Siemens Sinumerik ONE control is the first CNC "digital native" which allows the creation of a digital twin (DT).



*tion of computer models which allow supply of very useful information to plan and to globally optimize our products and solutions, as well as to validate and to manage the production process. The digital*

*twin allows this to take place seamlessly in a very short time, precisely and safely and with the highest accuracy in comparison with the truly ultimate physical counterpart. Moreover, once the product is accomplished, the digital twins exploit the data from the sensors installed on physical objects to represent their status, their operating conditions or the position in real time. We immediately realized the huge innovative potential of this new Siemens project because it met with our willingness to implement not so much the virtual digitalization on the technical issue to be worked, often called "geometric simulation", that is typically limited to the piece / work area, but rather to a global digitalization of the whole machine / system; therefore a digital twin more typically defined as "functional-productive" and more in line with our Smart Factory and Smart Production concepts and strategies on which we are involved and we have developed solutions for years".*

*Thanks to this innovation, the production processes with digital twins will allow the companies, who use the Ghiringhelli centerless grinding machines, to become more flexible with the reduction of the time-to-market, the expenditure and the maintenance services, by improving the quality and by increasing the productivity at all levels of the organization.*



The leading machine concept for the manufacturing of complex and precise workpieces

Hall: 26  
Stand: C16



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MILLTURN

M80X  
MILLTURN

M50-G  
MILLTURN

CLAMP ONCE – MACHINE COMPLETE



## Machines, Equipment and Systems for INTERNAL cylinder HONING and Lapping

Hall 11 – Stand F34

CAR s.r.l., with a thirty-year industrial experience, is one of the world-wide Leaders Manufacturers Company in the projecting and carrying out of Machines, Equipment and Systems for INTERNAL cylinder HONING and Lapping, with relevant mechanical precisions and roughness.

Our products, largely used in several industrial fields, are manufactured in Italy and sold all around the world by our trade-mark which is guarantee of quality and efficiency. Our Customers' honing applications are: tubes, hydraulic distributors, injectors, gears, bushes, dies hard metal, ceramic etc... and our Equipments are used in several industrial processes like oil hydraulics, cylinders super-finishing, and after deep drilling and grinding.

CAR S.R.L. standard production includes Vertical CNC MACHINES available to hone up to 1.500 mm, Horizontal up to 9.000 mm, CNC, manually or automatic Machines, controlled by PLC, based on software "LPE" projected and developed by CAR S.R.L. onto FANUC complete hardware and motorization platform.

As our specialized Projecting department, all



our Machines and relative operative programs can be personalized on specific Customers' requirements and honing exigencies. Together with Honing Machines, CAR S.R.L. also produce MANDRELS for all bore type with diameters range from 2 mm to 1.060 mm; these Mandrels are with expansion systems, nominal, single stroke, hardened, diamond/ CBN Sleeves and Special Tools manufactured on specific Customers' requirements.

Onto these Mandrels we can assembly Abrasive and Super-abrasives STONES with Silicon Carbide, Aluminum Oxide, CBN, Diamond, resin or metal bond.

Our job, with an high specialized Technical Staff able to solve any kind of honing problem, is always put to the continue research and technology development, and it is constantly rewarded through the confirmed Customers' satisfaction and fidelity.

The great part of our Production range will be shown at next EMO Hannover 2019; during this exhibition we will also present the first PE-500 with Robot station (FANUC) for automatic charge and dis-charge of pieces to hone.

## Centrotex S – Hainbuch launches small quick change-over interface on the market!

Hall 03 – Stand H20

Hainbuch has set new standards with the Centrotex quick change-over interface. The proven system is now also available in a version for smaller spindles. Thus, today Centrotex S is the smallest system available on the market for setting up clamping devices in a matter of seconds. With its diameter of just 224 mm, it is the ideal quick change-over system for machines with a small work space.

### No compromises in performance

With repeatability to  $\leq 0.002$  mm on the interface – without having to align – the latest version of the Centrotex quick change-over system can also meet the most rigorous requirements. The machine adapter is mounted on the spindle, and the clamping device equipped with the adapter counterpart can be exchanged for another clamping device in less than a minute. Thus long set-up times are a thing of the past.

### Easier operation

The smallest Centrotex version does indeed incorporate the proven technology of its big brother, however it is clearly superior in terms of convenience. The Centrotex S is actuated via just one radial locking



screw and ergonomic operation has been significantly improved, thanks to the fewer tightening turns required. In addition, the Monte q changing fixture offloads the machine operator and contributes to a faster clamping device set-up.

### Key advantages:

- Interface between machine and clamping device
- Only one radial locking screw
- Suitable for spindle nose KK5, KK6, AP140, and AP170
- Repeatability to  $\leq 0.002$  mm on the interface – without having to align
- Ergonomic handling
- Resistant to contamination
- For easier handling, the Monte q changing fixture can be implemented for heavy clamping devices

### Benefits:

- Clamping device change-over in less than one minute.
- No compromises in the selection of clamping devices, job-oriented manufacturing.
- No loss in rigidity, in comparison with clamping devices that are bolted directly on the machine.

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# evolving together



  
**EMO Hannover**  
16-21-9-2019  
The world of metalworking

Hall 13  
Stand C14

  
MACHINING  
CENTERS

  
FLEXIBLE  
AUTOMATION

  
SYSTEM  
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SUPERVISING  
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## TLAXP – VISUAL level indicator in steel with glass for high pressure

Body made in nichel-plated steel and transparent inspection window in glass.

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## RFID innovation for industry of the future

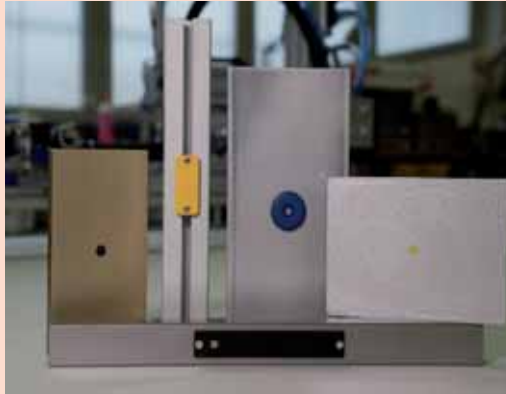
With over twenty years in the ICT sector, Partitalia srl is an Italian business that produces and markets smart cards, RFID tags and readers throughout Europe. It has a wide range of RFID on-metal products: innovative and customized solutions for Industry 4.0.

### ON-METAL SOLUTIONS

In the context of industrial traceability, Partitalia proposes systems for preventive maintenance, for production tracking or for automation, that - entrusted to machines connected to the network - can improve reliability and productivity of the plants, preventing machine downtime and protecting the worker physical condition.

Basically, the industrial processes are optimized thanks to fixed and wearable RFID devices, which read RFID tags data applied to metal surface to be identified. The fixed devices are antennas installed on machines that identify at a distance. Meanwhile the wearable devices are simple to use bracelet: the operator only needs to bring the wearable system closer to the object on which the RFID tag is applied. Then the device directly sends the data to the cloud database. The software interface is easy and intuitive to consult and from which to access and display the certified data: it allows to have complete business intelligence of the IoT operations.

This means that each tagged object can be tracked, allowing you to optimize costs and operating time at the industrial level. Each solution can be customized to meet the specific needs of companies. Fur-



thermore, the collected data allow the monitoring of vital and environmental parameters during work activities, with the aim of improving performance and welfare: a smart device worn by a worker belonging to a risk category can, by communicating data on his/her physical condition to the network, even save his/her life. This is one of the sectors where Partitalia is investing in research and development and already counts important references.

### R&D

In order to provide increasingly up-to-date and improved solutions, Partitalia invests

over 7% of turnover in research and development.

Between 2016 and 2018, the care for Research and Development has led to an increase of more than 25% in sales: Partitalia goal is to be among the active players in the fourth industrial revolution. For this, it is concentrating on innovation in two areas: production, optimized with robots and remote control systems, and product development, through concrete responses to the current needs. In particular, during the last year, Partitalia has been working to create wearable solutions based on RFID technology for data collection. For this reason, it has collaborated actively since 2017 with Italian research centres of excellence in the technology sector: the Scuola Superiore Sant'Anna in Pisa, the University of Pisa, and the Polytechnic of Milan.

Moreover, again since 2017, SensorID has been part of Partitalia group, with Research & Development skills in the design of RFID readers and related solutions.

## Poggi eliminates gears with P-gear®

P-gear®, the new oilfree, gearfree technology, is a revolution in the world of mechanical transmissions. This is not just one product for the market of power transmission, it is rather a cutting-edge system, which can be tailored according to customer's requirements: a concept that can be industrialized without limits as to the fields of application.

Without any need for gears and virtually maintenance-free, P-gear®, appears as advanced, silent, clean technology, completely lubrication-free. This device achieves significant energy savings and enhanced energy performances, by means of two rotors equipped with permanent magnets, which ensure transmission / speed reduction without any contact between components.

From a three years long study, experiments have been carried out for the production of a magnetic right angle gearbox, whose next step forward will be taken on the Hannover Messe. There is as well a speed reducer that brings significant energy savings.

P-gear® grants transmission for several industrial sectors, especially in those cases in which quietest operation and elimination of lubricants are necessary, with also strong reductions in vibrations and very low overheating. P-gear® is therefore a device that will allow to have safer applications.

The sectors of destination are the most different ones: pharmaceutical, medical, food & beverage, civil engineering, robotics in general



and collaborative robotics, automation, packaging, automotive, energy, naval, oil, agriculture, constructions. P-gear® will not compete with the market of reducers, on the other hand it will offer an alternative solution, ideal for those applications where traditional devices may have limits or where there are specific needs in terms of power output, energy savings or difficulties in the application. In this way Poggi has reduced maintenance costs, thanks to contactless meshing, with wear-free and frictionless features. Poggi also avoids any contamination from leakage of lubricants, by combining a better overall performance and considerable energy savings.

Poggi Trasmissioni Meccaniche S.p.A. was founded in 1958 by Pierluigi Poggi's commitment and dedication, and both values today are carried on by his three children. It is specialized in the manufacturing of belt pulleys, right angle gearboxes and other solutions in the field of power transmission like timing belts, V-belts, fixing elements, couplings, sprockets, baseplates for electric motors. It has been appreciated for more than sixty years in over forty countries worldwide thanks to its innovative approach, also a custom-made one. The cutting-edge range of services proposed by Poggi is the result of constant researches and experimentations, of an accurate path of planning and of production that ensures an innovative product, certified and proudly made in Italy.

# MICTU: from mechanics to special tools – always serving customers' needs



For over 30 years, MICTU, who are based in Quero Vas in the Italian region of Veneto, have been the go-to manufacturer for companies that need both standard and custom precision tools.

“We produce tools for a wide range of needs and applications in various sectors and our customers consider us to be a trustworthy and competent partner in consultancy, design, and development of customized solutions,” the company explains. They further highlight that one of their main strengths lies in “supporting customers in their work, helping, and making it easier for them to maximize productivity, reduce costs, and increase quality.”

To achieve this, the company continually makes investments to “preserve its high technological standards. In this way, we can manufacture high-performance tools that meet the most specific requirements.”

Specializing in tool development and manufacturing, consultancy, and quality control, MICTU addresses a vast array of markets: from precision machining, through automotive and aerospace, to medical and optical industries. It also produces PCD tools using laser technology thanks to a Laser Line Precision machine supplied by EWAG.

The EWAG Laser Touch Machining® process allows this compact machine to produce tools with complex geometries as well as wear-resistant and chip-free blades – all in a single clamping operation. The company is dedicated to fulfilling its mission: understanding



and meeting customers' needs. In a market requiring processing of materials such as titanium, nickel silver, polycarbonate, nylon, and acetate, the company has to guarantee production tolerances down to one hundredth of a millimeter. It also needs to supply cutting blades with perfect values in terms of surface finish, edges, and honing radius. All parameters are scrupulously checked with the latest generation of measuring machines.

This is the reason why the company decided to concentrate on laser technology: “It has a wider array of workable materials, and it will open up other markets for us as our product range is more complete,” highlighted Andrea Collavo, product development manager at MICTU.

The laser machine delivers results that go well beyond expectations. This is also down to the Laser Line machine being tuned to the tool manufacturer's requirements as the two companies worked side-by-side on the setup.

“I am extremely satisfied because this machine is working even better than expected,” concludes Collavo. He adds: “We reach machining speeds which we did not believe possible – almost double the manufacturer's specified figures. We achieve outstanding results in terms of speed with no compromises in finished quality. The machine unleashes its full potential as regards efficiency and flexibility.”

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# IMG special line of vices

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IMG is the acronym that identifies a special line of vices that OML offers in a self-centering version, convertible into double clamping and fixed: 3 types of clamping with a single vice.

The IMG series (which includes the IMG 125-220, IMG 125-320, IMG 160-270 and IMG 160-420 configurations) guarantees a rather wide clamping range, as well as maximum flexibility and the possibility of performing an external or internal clamping.

IMG vices are equipped with reversible Sintergrip jaws that ensure minimum clamping depth and no need of pre-machining.

The mechanical clamping guarantees complete protection, thanks also to the use of a patented telescopic system. The IMG vices are equipped with an interface for zero point locking systems APS / WPS and Lang 96 mm and are equipped with standard mounting holes.

In the IMG series vices the operating screw is completely protected with a patented telescopic system. This avoids the need to remove the jaws in order to find the optimal clamping position. Normally vices with protected screws use the operating screw as a protection tool. This type of solution, however, requires continuous movement of the jaws in the appropriate seat, since their stroke is reduced to a few mm. On the contrary, IMG vices, while maintaining the screw completely protected, allow a continuous movement of opening and closing of the vice. Ideal for automation and use of palletizing systems, the IMG series vices are rather simple to install: mounting is directly on the machine table using clamps (available as an option). A rather wide opening is provided for the optimized chip exit; maximum precision and repeatability are ensured by the treated and ground guides.

With IMG vices it is possible to reach a maximum clamping force of 50 kN. To increase its strength is the combination with the patented SinterGrip system, specifically designed to clamp a piece in the minimum clamping depth (ie 3.5 mm). In this way, in addition to being able to machine the piece completely in one operation (especially in the case of five-axis machines), it is possible to save on raw materials, a very important point when these can have a great impact on the price (aluminum, titanium, etc). Furthermore, with the Sintergrip system it is possible to make the most of the performance of the machine tool and of the tools, ensuring safe clamping without deformation of the piece. The clamping of the piece with traditional systems required in fact a wider clamping surface, which in addition to involving a waste

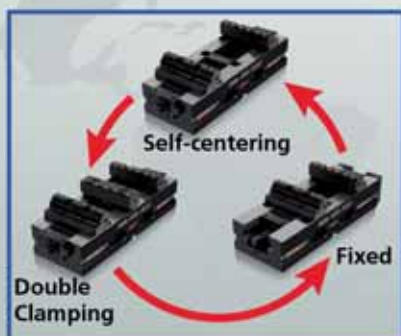


of raw materials increased the possibility of deformation of the piece. With Sintergrip, on the other hand, the clamping surface is reduced to a minimum, no pre-machining of the piece is required, as well as guaranteeing great clamping stability and higher machining speed.

Another point that identifies the IMG self-centering vices is the modularity: they can easily be transformed into fixed clamping vices or double clamping vices. The double clamping vices have a completely compensating mechanism; this means that it is possible to clamp two pieces of different sizes.

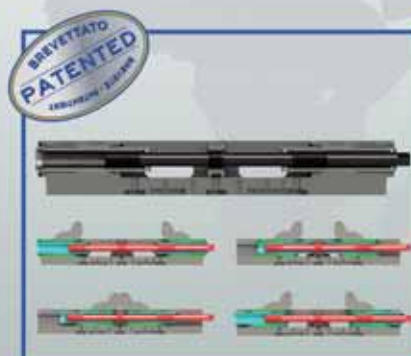
# IMG

IMAGINATION HAS NO LIMIT



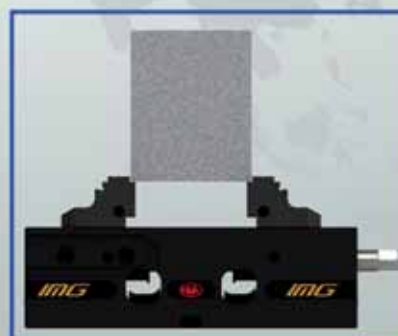
**MODULAR**

The **IMG** self-centering vices can be easily transformed into fixed vices or double clamping vices with a completely compensating mechanism.



**PATENTED PROTECTED SCREW**

Fully protected operating screw with patented telescopic system.



**HIGH CLAMPING PERFORMANCE**

Clamping up to 50 Kn. The clamping force, combined with the patented SinterGrip system, guarantees high performance.



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